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Land Protection Branch

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March 5, 2014

Hazardous Waste

Confidential

Mr. Derrick Williams Georgia Environmental Protection Division 2 Martin Luther King, Jr. Dr. SE Suite 1462 East Tower Atlanta, GA 30334

RE: 4th Semi-Annual Progress Report, Diamond Rug and Carpet Mills, Eton, Murray County, Georgia; HSI#10534

Dear Mr. Williams:

GaiaTech Incorporated (GAIATECH) is submitting this progress report to update the status of the former Diamond Rug and Carpet Mills facility (currently operating as Mohawk Industries and hereinafter referred to as the "Site") located in Eton, Murray County, Georgia. This update details the findings of the last semi-annual sampling event, updates the Conceptual Site Model (CSM) for the Site, and provides conclusions and recommendations as detailed in subsequent sections.

## INTRODUCTION AND BACKGROUND

The subject property is located at 4140 North Highway 411 just north of the city limit in Murray County, Georgia. The Site is currently used for manufacturing carpet and is presently owned by the Aladdin Manufacturing Division of Mohawk Industries, Inc. (Mohawk).

The property is located within an industrial area on the north side of Eton Georgia. It is bounded on the north by a small tufting operation and undeveloped land, to the east by CSX railroad line that is bounded further to the east by other industrial facilities, to the south by Beaulieau Industries and to the west of US Highway 411 by Superior Carpets.

## **CURRENT REGULATORY STATUS**

The Site was listed on the Georgia Hazardous Site Inventory (HSI) for a release of tetrachloroethene (PCE) in groundwater at a concentration exceeding a reportable quantity on April 9, 1999. The Site was designated as a Class II Site with HSI No. 10534. Since then, numerous Site investigation and reporting activities have been conducted by others to further characterize the release.

GaiaTech, Inc. (GaiaTech) was retained by Mohawk to respond to a November 9, 2010 Notice of Deficiency (NOD) letter from the Georgia Environmental Protection Division (GEPD) regarding an Interim Remedial Status Report prepared by Conestoga Rovers in June of 2005.

In the letter, the GEPD required additional clarification to the June 2005 report, as well as additional sampling to define and characterize the extent of impact of various regulated substances in soil and groundwater.

GaiaTech conducted limited soil and groundwater sampling in November 2011 followed by the preparation and submission of a Voluntary Investigation and Remediation Plan (VIRP) Application dated December 14, 2011. The VIRP was submitted in lieu of a Corrective Action Plan, which would have been required under the Georgia Hazardous Site Response Program. The VIRP Application was approved by the Georgia EPD on April 12, 2012. The VIRP Approval letter outlined minimum schedule requirements, for assessment and reporting milestones. The following details completed VIRP milestone date, which are as follows:

- Semi-Annual Progress Reports October 12 and April 12 through October 12, 2016. A total of three (3) Semi-Annual Progress Reports have been Submitted to date: October 12, 2012; April 12, 2013; and October 12, 2013. This brief letter update constitutes the 4<sup>th</sup> Semiannual Progress Report update.
- Complete Horizontal Delineation on the Qualifying Property Must be demonstrated in the April 12, 2013 Semi-Annual Progress Report (12 months from VIRP Approval). Horizontal delineation was completed as of the 2<sup>nd</sup> Semiannual Progress Report Submission in April 2013 via the installation and sampling of four (4) additional horizontal groundwater delineation wells (OW-10 to OW-13) and the sampling and analysis of existing shallow monitoring wells (OW-9 and OW-7). The horizontal extent of impact was again assessed as part of the 3<sup>rd</sup> Semiannual Progress Report and, likewise, verified complete horizontal delineation with periphery plume monitoring locations reporting concentrations of Volatile Organic Compounds (VOCs) below the laboratory reporting limits. The data from the 2<sup>nd</sup> and 3<sup>rd</sup> semiannual reporting events indicated that the plume was stable and isolated to the Site.
- Complete Horizontal Delineation on all Impacted Properties Must be demonstrated in the April 12, 2014 Semi-Annual Progress Report (24 months from VIRP Approval). As indicated above, the horizontal extent of impact was delineated on the subject Site with no indications of off-site migration. Thus, the milestone of horizontal delineation on all impacted properties has been met.

The following VIRP Milestone items remain to be addressed:

• Complete Horizontal and Vertical Delineation, Finalization of Remedial Plan, and a Cost Estimation for Remedial Implementation - Must be demonstrated in the October 12, 2014 Semi-Annual Progress Report (30 months from VIRP Approval). As previously indicated, Mohawk has completed horizontal delineation actives. In addition, analytical testing data from the last sampling event in September 2013 indicated that the plume remains stable with concentrations below applicable Risk Reduction Standard (RRS)

criteria and therefore a Remedial Plan does not appear to apply to the Site. As such, the only milestone item remaining for the October 12, 2014 milestone is vertical delineation of the groundwater plume.

• Submission of Compliance Status Report - April 12, 2017.

## VERTICAL DELINEATION ACTIVITIES

Currently, Mohawk is in the process of assessing various options for completing the vertical delineation of the groundwater plume for addressing the October 12, 2014. These options may include:

Re-development of Monitoring Well OW-8D: Based upon field observations, monitoring well OW-8D appears to be a double cased well with a 2-inch diameter outer casing and a 1-inch diameter inner casing installed to a total depth of approximately 49 feet below ground surface (bgs). Well construction information is not available to ascertain additional construction information. Currently, OW-8D is the deepest evaluative point.

Monitoring well OW-8D, sampled to evaluate the vertical extent of impact, contained concentrations of 1,1-Dichloroethane (12  $\mu$ g/L), 1,1-Dichloroethene (18  $\mu$ g/L), and Tetrachloroethene (78  $\mu$ g/L) in excess of the laboratory detection limit during the most recent sampling event in September 2013. All other concentrations of VOCs were reported below the laboratory detection limits. Historical data trends for OW-8D suggest an increasing concentration trend.

Prior to the installation of a new Type 3 double-cased well, the re-development and sampling of OW-8D is being contemplated as a preliminary measure to determine if the removal of a significant volume of water from the sand pack and surrounding formation may positively affect the groundwater concentrations.

• Installation of a Type 3, Double-Cased Monitoring Well: Should analytical testing results of the re-development and re-sampling of OW-8D yield unfavorable results and suggest that a deeper monitoring location is warranted; then a Type 3, double-cased monitoring well would be installed and sampled to achieve the vertical delineation of the groundwater plume. The typical construction of a Type 3 monitoring well would involve drilling to the top of competent bedrock and keying an initial conductor casing into the bedrock formation via rock drilling techniques. Upon attaining a depth several feet into competent bedrock, an outer conductor casing would be installed and grouted into the bedrock to seal off the upper shallow groundwater-bearing zone. After allowing the grout to cure a minimum of 24-hours, all accumulated fluids from within the conductor casing would be removed via pumping and containerized.

Drilling would then be resumed from within the conductor using a smaller diameter

rock drilling technique and the bore hole advanced until a water bearing fracture is encountered. The well would then be completed by setting an inner casing screen to intercept the water bearing fracture and riser to the surface, followed by the installation of a filter pack, bentonite seal, and grout to the surface. The technique is designed to isolate the shallow groundwater impacts from deeper water bearing zone.

Once vertical delineation is achieved, Mohawk will likely submit a CSR in lieu of the subsequent Semi-annual Progress Report. Please do not hesitate to contact any of the undersigned if you have any questions or need additional information.

Sincerely,

**GAIATECH INCORPORATED** 

Michael H. Wilson

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